

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (Currently Amended): A multicarrier transfer system based on an OFDM/CDMA modulation system, said multicarrier transfer system comprising:

a spread signal rearrangement unit which two-dimensionally arranges spread signals for a transmission data array on a frequency axis and a time axis first, and then rearranges the group of spread signals two-dimensionally arranged for one transmission array in a regular pattern,

wherein a transmission side transmits a signal generated by said spread signal rearrangement unit by time axis unit, and a reception side restructures the transmission data array by demodulating the received signals, and

said spread signal rearrangement unit can change an arrangement ratio of the two-dimensionally arranged signals on the frequency axis and time axis based on the conditions of a transfer path.

Claim 2 (Previously Presented): The multicarrier transfer system according to Claim 1, wherein said spread signal rearrangement unit arranges the group of two-dimensionally arranged spread signals for one transmission data array in a random pattern.

Claim 3 (Previously Presented): The multicarrier transfer system according to Claim 1, wherein said spread signal rearrangement unit rearranges the group of two-

dimensionally arranged spread signals for one transmission data array on the frequency axis in a random pattern.

Claim 4 (Previously Presented): The multicarrier transfer system according to Claim 1, wherein said spread signal rearrangement unit divides the group of two-dimensionally arranged spread signals for one transmission data into several partial arrays and rearranges the partial arrays within an OFDM signal in a random pattern.

Claim 5. (Canceled).

Claim 6 (Currently Amended): A multicarrier transfer method applied in a multicarrier transfer system based on an OFDM/CDMA modulation system, said method comprising the steps of:

two-dimensionally arranging spread signals for one transmission data array on a frequency axis and a time axis; and

a step of rearranging the group of two-dimensionally arranged signals for one transmission data system in a regular pattern, and

wherein, in the spread signal rearrangement step, an arrangement ratio of the two-dimensionally arranged signals on a frequency axis and a time axis can be changed based on the conditions of a transfer path.

Claim 7 (Previously Presented): The multicarrier modulation method according to Claim 6, wherein, in the spread signal rearrangement step, the group of two-dimensionally arranged signals on the time axis are rearranged in a random pattern.

Claim 8 (Previously Presented): The multicarrier modulation method according to Claim 6, wherein, in the spread signal rearrangement step, the group of two-dimensionally arranged signals for one transmission data array are rearranged on the frequency axis in a random pattern.

Claim 9 (Previously Presented): The multicarrier modulation method according to Claim 6, wherein, in the spread signal rearrangement step, the group of two-dimensionally arranged signals are divided into a plurality of partial arrays and the partial arrays are rearranged within an OFD signal in a random pattern.

Claim 10 (Canceled).

Claim 11 (Currently Amended): A multicarrier transfer system based on the OFDM/CDMA modulation system, said system comprising:

a transmitting having,

a spread signal rearrangement unit which receives spread signals obtained by spreading of a transmission data array,

a) two-dimensionally arranges the received spread signals on a frequency-time axes system, and

b) rearranges on the frequency-time axes system in a regular pattern a group of spread signals to obtain a transmission signal; and

a transmission unit which processes the transmission signal and transmits the processed transmission signal; and

a receiver having,

a receiving unit which receives the transmission signal; and
a demodulating unit which reconstructs the transmission data array by demodulating the transmitting signals,

wherein said spread signal rearrangement unit can change an arrangement ratio of the two-dimensionally arranged signals on the frequency axis and time axis based on the conditions of a transfer path.

Claim 12 (New): A multicarrier transfer system based on an OFDM/CDMA modulation system, said multicarrier transfer system comprising:

a spread signal rearrangement unit which two-dimensionally arranges spread signals for a transmission data array on a frequency axis and a time axis first, and then rearranges the group of spread signals two-dimensionally arranged for one transmission array in a regular pattern,

wherein a transmission side transmits a signal generated by said spread signal rearrangement unit by time axis unit, and a reception side restructures the transmission data array by demodulating the received signals, and

said spread signal rearrangement unit divides the group of two-dimensionally arranged spread signals for one transmission data into several partial arrays and rearranges the partial arrays within an OFDM signal in a random pattern.

13. (New): A multicarrier transfer method applied in a multicarrier transfer system based on an OFDM/CDMA modulation system, said method comprising the steps of:

two-dimensionally arranging spread signals for one transmission data array on a frequency axis and a time axis; and

a step of rearranging the group of two-dimensionally arranged signals for one transmission data system in a regular pattern,

wherein, in the spread signal rearrangement step, the group of two-dimensionally arranged signals are divided into a plurality of partial arrays and the partial arrays are rearranged within an OFD signal in a random pattern.